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ABSTRACT

This booklet discusses approaches and procedures for implementing a program planning and budgeting system (PPBS) in a school district. Focus of the discussion is strictly on implementation procedures; no effort is made to describe the background of the basic concepts of PPBS. The author refers frequently to his involvement and experiences in a PPBS implementation effort in the Fort Wayne community schools. The appendix presents specific information about the Fort Wayne program, including its implementation timetable, program structure, estimated budget for 1972, and strategy for evaluating instructional programs. A bibliography of publications dealing with behavioral objectives in general and PPBS in particular is also included. (JG)

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PPBS

SUGGESTIONS FOR IMPLEMENTATION

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INTRODUCTION

The Fort Wayne Community Schools have been involved for two years in an effort to explore and implement those facets of PPBS which seem to offer potentially beneficial results. For the past year and a half I have served as director of that effort. In the material which follows, I will attempt to share with the reader many of the procedures that we have utilized and some of my personal impressions concerning various aspects of PPBS and its implementation. The reader should recognize that considerable difference of opinion exists in regards to many aspects of PPBS and in order to gain a balanced perspective the perceptions of others involved in its implementation should be sought. No effort will be made here to describe the background of the basic concepts of PPBS. Implementation procedures will be the focus of our concern.

I. Getting Started

One of the most difficult parts of any endeavor of any great significance is the making of the initial decision to commit yourself or your organization to that endeavor. In the State of Indiana that initial decision has already been made. The 1971 General Assembly passed a law which says in effect that by 1977 all school districts in the State shall implement a program budgeting system to be developed by the Commission on General Education. That system is now in the process of development and should be completed by July of 1976.

The leadership for any implementation of PPBS within the local school system should come from the superintendent. It definitely is a management tool and it will only be productive if organized to serve the management style of the chief administrator. The superintendent will surely want to familiarize himself thoroughly with the concept. Key systemwide administrators; such as the assistants responsible for instruction and business management must also be thoroughly acquainted with, and committed to, the concepts of PPBS very early in its implementation. Commitment at this level of administration is an absolute prerequisite to the development of a PPB System that will become a contributing and vital tool in educational administration. Without this commitment PPBS is almost certainly destined to become merely an exercise in futility.

When the superintendent and his key staff members are satisfied that they are both comfortable with the concepts involved in PPBS, and are committed to those concepts, it is time to establish preliminary plans for implementation. It should be pointed out that careful planning is probably the key component of PPBS and it would certainly be grossly wrong to not carefully plan the implementation of a "planning system."

At this point, the Board of School Trustees needs to become involved. Care should be taken to help its members to understand the concepts, see its potentials, and recognize its limitations. Official board action recognizing and sanctioning exploration and implementation of PPBS is advisable.

An early decision which should be made is: "Who will be responsible for the implementation?" The local decisions will vary but careful consideration should be given to the question. Assuredly one person should be designated as responsible for the implementation. In large school systems, a person designated the PPBS Director may be given this specific responsibility for the implementation. In other systems an Assistant Superintendent, a Director of Research and Development, a Director of Data Processing, or a person holding a similar systemwide position could be delegated this respon-

sibility along with his other responsibilities. Whoever is appointed, the Superintendent of Schools must be accessable and supportive of the role. PPBS in its totality touches upon almost every facet of school operations; only the committed encouragement of the chief school administrator can allow and facilitate it reaching its maximum potential.

Many school systems have found the appointment of an advisory committee for PPBS implementation to be useful. This committee can effectively offer input, disseminate information, and serve as a sounding board. It is doubtful if such a committee can function as a decision making group. Composition of the committee may vary, but it might be wise to consider starting with a committee of key administrators and expanding it to include teachers and lay citizens as the implementation proceeds to later phases. The positions of those originally serving on the Fort Wayne Advisory Committee are shown below:

Superintendent of Schools
PPBS Project Director
Associate Superintendent
Assistant Superintendent
Director of Pupil Personnel
Director of Personnel
Director, Data Processing
Director, Elementary Education
Director, Secondary Education
Director, Fiscal Affairs
Director, Special Education
Director, Vocational and Continuing Education
Assistant Consultant for Audio Visual
Principals: Senior High, Junior High, and
(2) Elementary

Recently six teachers have been added to the committee. One teacher was selected from each of the following: Senior High Schools, Junior High Schools, Special Education, and Vocational Education. Two teachers were selected to represent the Elementary Schools.

Another area in which early decisions should be made is in the establishment of the timetable for implementation. Our experience is that goals and deadlines are extremely important. In the rush of daily operations it is exceedingly easy to put off those things that do not have pressing operational priority. In spite of all of its potential as an operational tool PPBS implementation is not likely to be seen as a pressing priority.

Establishing a timetable is fraught with problems and uncertainties, however. A major problem is simply that the identification of what constitutes a complete and operational PPB System for schools still has not been clearly identified.

Although some experts are now saying that it might take as much as ten years for a school system to fully implement PPBS, a three year plan to implement identified major components would be a wise direction in which to move. The turn over of personnel and the motivation factor are to be elements which would make plans of longer duration difficult to establish with any certainty. Whatever timetable (see Ft. Wayne Community School's Timetable in appendix) is established should be specific enough to give direction and momentum to the implementation while at the same time flexible enough to be adjusted for unforseen obstacles.

As the timetable is being developed some consideration should be given to the decision making pattern being followed within the school system, and what pattern would be most beneficial to serve the effective management of this particular school system. PPBS is neutral on the question of how centralized or de-centralized decisions making ought to secure. Very early in its implementation, however, decisions must be made that will affect the mode of decision making within the system in the future. It is certainly best to be prepared to design the system to function in the desired fashion. Care must be taken, however, to keep flexibility available and not allow procedures to become too rigid. It is especially important not to allow procedures to become too dependent on the leadership style of one individual. It would be wise to implement the procedures and accept the discipline PPBS requires at the central administration level prior to implementing it at the local school level. PPBS does impose a discipline upon people. It would seem psychologically beneficial for the school leadership to demonstrate acceptance before involving others in the strategy for implementation.

In Fort Wayne there were three other early decisions made that are recommended for consideration:

(1) Since PPBS represents a cycle that allows entry at different points, it was decided that our entry point would be program assessment. It was generally felt that we had programs functioning, and that before we started changing those programs we should really know what they were and how well they were functioning.

(2) It was decided that any PPBS procedures we adopted must be tailored to fit this system. In other words, we weren't interested in buying a packaged system which might or might not serve the system well.

(3) Whatever plan was to be implemented had to operate within the existing organizational structure. Increased numbers of administrative positions would not be accepted as an outgrowth of PPBS implementation.

In general, it is recommended that the preliminary acts in PPBS implementation should include: becoming informed, seeing that other key persons are informed, gaining commitments, and making some very basic procedural decisions.

II. Orientation of Staff

The orientation of staff to the concepts and procedures involved in PPBS represents an extremely important aspect of PPBS implementations. (It is important that this be recognized and that ample consideration be given to proper orientation.) From our experience there are some basic realities that helped us realize how important carefully planned orientation is. Our experience was that most staff personnel did not remember having heard of Planning Programming Budgeting Systems prior to our orientation sessions. Secondly, those who were aware of it generally associated it negatively either with an accountability model or with a purely business management oriented cost accounting procedure. Some viewed it as sinister because it represented a change model which would disrupt the status quo. Since PPBS relies heavily upon the input and cooperation of the staff in general, attitudes and misconceptions such as these are certainly counter productive to its implementation.

The basic orientation in Fort Wayne began with discussions among a few key administrators and an orientation session for the Board of School Trustees. The second stage was a two day workshop involving all administrators. This workshop was conducted by Dr. Harry Hartley of the University of Connecticut. The purposes of these sessions were to inform the administrators of the basic concepts related to PPBS and to motivate them to investigate its possibilities. This was followed a couple of months later by an evening session for administrators presented by representatives of the Montgomery County School District, Maryland, one of the first school districts to work with a PPB System. A third evening session was held later where the focus was upon making the system work in Fort Wayne.

In order to acquaint personnel at the local school level with PPBS, a slide tape presentation was developed and presented by the PPBS Director in each school in the system. At these presentations it was possible for each teacher to ask questions directly of the PPBS Director and/or that teacher's principal. This same presentation was also shown at a public meeting of the school board and to several community organizations. All new teachers to the Fort Wayne Community Schools are introduced to the concepts involved in PPBS as a part of their general orientation to the school system.

Thus it was felt that the ground work had been set for a general understanding of PPBS within the system. Work with groups has now changed to in-service type presentations to affected groups.

III. The Program Structure

In accordance with the concepts of a systems approach, it is necessary to identify the components which go together to make up the total; and to identify those components in such a way as to provide a method to study their interrelationships. Since PPBS focuses upon the outputs or products of an organization and since the ultimate output of a school corporation is the improvement in skills, understandings, and attitudes of young people; the program structure should facilitate identification of interrelationship among programs designed to accomplish this mission. When biologists were confronted with the nearly impossible task of understanding the functioning of the more complicated living organisms, they chose to study it in terms of systems, organs, tissues, and cells. This procedure allowed the biologist to reach a depth of understanding that would probably have been impossible if they had undertaken to study those organisms from a total or gross approach. In the same way the functioning of an educational system is undoubtedly too complicated to understand and control efficiently unless dealt with in some systematic fashion. The program structure provides the vehicle for understanding the relationships and contributions of the various elements of the organizations to the total mission of the system.

Programs can be identified and organized into structures in various fashions; most books on PPBS discuss the various ways this can be done. In Fort Wayne, programs were identified in rather traditional terms. In the general instructional area where most controversy is found in program identification, programs were designated as subject matter areas in the secondary schools and as grade levels in the elementary school. (See Program Structure Fort Wayne Community Schools in appendix) Primarily this was done because it reflected the actual functioning situation of the schools. It was felt that to organize the programs in some other fashion, such as by the relationship of instructional objectives, placed too much of a burden upon the PPB System.

Although Handbook II of the U.S. Office of Education and the State Department of Education will probably set certain parameters for the development of program structures for local schools, it is anticipated that much leeway will remain available for the local system to develop one which will fit its needs. As the structure is being constructed, the following factors might be considered:

(1) Organizational structure of the school system - Although the program structure need not precisely match the organizational structure of the system, it certainly cannot function well if it is not compatible with it. Programs are more manageable if they lie clearly in the identified areas of responsibility.

(2) Autonomy - Programs should be sufficiently autonomous so that their resources, constraints, and results can be separately identified. The program identifications should simplify, not complicate, the study of effectiveness of function.

(3) Relationship - The structure should help to identify relationships. Programs of similar nature should be so positioned in the structure so as to reveal that relationship. The program structure should help reveal how the system functions.

(4) Visibility - The program structure should provide visibility to those aspects of the output of the organization that are most vital. Care should be taken to be sure that the chosen program structure focuses on the priority functions of the school system.

(5) Inclusiveness - Care must be taken to be certain that the program structure includes all operations of the school system. Every activity must fit into the structure in a natural and rational manner.

(6) Special Funding - Although opinions differ, special consideration should be given to the position of programs which receive special funding. It can be argued that all activities that seek to accomplish the same objective should be tied together regardless of method of funding. On the other hand, programs that receive special funding often require separate evaluation and accounting reports; therefore, such programs should be kept separate enough that they can be identified separately.

(7) Ability to implement - implementation of PPBS with its many facets is not a simple task. The program structure should be such as to encourage and simplify the procedure. Of course, PPBS should serve the educational function of the school. Flexibility in the program structure must be maintained.

Care should be taken in identifying the program structure to be utilized by the school system, as it will have a major effect upon the ultimate nature of the PPB System developed within the school system.

IV. The Program Budget

The program budget is in many ways an important departure from the traditional function-object budget. Resources are related directly to programs which, hopefully, are designed to reach specific objectives of the organization. For

instance, all appropriations necessary to reach the Social Studies objectives of the school system should be shown together, thus directly relating cost to mission. In an age of increasing expectation from education and of increasing reluctance to allocate funds for the support of those expectations, the superiority of the program budget should be obvious. The program budget does reveal priorities. The program budget does reveal the cost of reaching objectives, and it does facilitate comparisons of costs and accomplishment. The program budget, in other words, has tremendous potential for aiding rational management of schools. Of course, it would be wrong to assume that having a sheet of paper with appropriation by programs on it will work miracles. It is how the program budget is utilized that will make the difference. It is quite likely that the program budget will be different enough in its meaning that time will be necessary for school administrators, board members, and the community to become aware of its full meaning and potential.

The Fort Wayne Community Schools have not yet attempted to totally budget by program. To date, it has relied upon the conversion of conventional budgets to arrive at program budgets. Notice there is a decided difference in the two approaches. When all budgeting is done by program, the process of establishing program priorities will be manditory because decisions will be made between programs competing for the same resources.

The process of converting a conventional budget to a program budget (crosswalking) is a simple process. Each line item in the conventional budget is individually transferred to the appropriate program or programs in the program budget. This procedure is followed line item by line item until the entire conventional budget has been reallocated. The appropriated amounts then are totaled by program categories. In many cases this is a rather easy process, in others it is difficult. Typical of the problems that arise during crosswalking is the problem of how to allocate the costs associated with an administrator and his staff when he has responsibility in several program areas. In this case there are two possibilities: (1) assign the costs associated with the administrator and his immediate staff to a program designated "District Administration" or (2) prorate those costs to the programs for which he has responsibilities. There are good arguments for either choice, but whatever the choice is consistency should be maintained from program to program and from year to year.

Another problem area often arises concerning the assignment of teacher salaries to programs. At this point, we have assigned salaries to programs in terms of the average teacher salary times the number of teachers involved in the program rather than by actual contracted salary. It will be much better when we are able to conveniently apply actual contracted

salaries to program costs. It must be recognized that in elementary and secondary education salaries represent the major cost item, and that college degree and length of service for the most part determine salary differences. This means that applying actual salaries to program might cause a distortion in apparent priorities that needs to be recognized. Care must be taken to avoid making educational decisions entirely upon budgeting considerations.

Fringe Benefits also present some problems in the cross-walking procedure. It certainly is tempting to simply identify a program as "fixed charges" or "fringe benefits" and assign those costs to those areas. These costs, however, are quite significant. To assign them for expedient reasons to any area other than to the program with which they are associated is of doubtful merit.

It should be pointed out that Revised Handbook II recently released by the U.S. Department of Education definitely advocates and facilitates program budgeting. In fact, in all but the instructional area the new functional areas identified by it represent what could be considered program areas. This indicates that in the near future all educational budgeting will be more program oriented regardless of the fate of PPBS.

V. Program Assessment

In keeping with the general thesis that we should know where we stand prior to starting off to somewhere new, the first major systemwide effort into the PPBS field in the Fort Wayne Schools was in the area of instructional program assessment. The term "assessment" was chosen in preference to the term "evaluation" because in our view evaluation implies the determination of program quality in terms of some predetermined standard. Assessment, on the other hand, only implies determining the existing condition. This knowledge of where we stand coupled with the second step of determining where we want "to be" should allow decisions to be made in terms of actions necessary to close any existing gaps. Once specific objectives are determined program evaluation will be possible and appropriate.

During the 1972-73 school year, we made a real effort to complete an assessment of each of our secondary instructional programs. A steering committee composed of the Director of Secondary Education, the Director of Elementary Education, three subject matter consultants, one grade level consulting teacher, an elementary Assistant Director, and two Representatives of the Testing Department met with the PPBS Director several times to determine the format for the assessments. (See appendix) Once the format was finalized the subject matter consultants were charged with the responsibilities of completing the actual assessments.

The assessments have been completed and have proven to be informative and useful. With these as background several curriculum committees were formed last summer with the responsibilities of determining what the objectives of the programs "should be."

Plans are now being made to complete assessments of the Elementary, Vocational, and Special Education programs this school year. In the Secondary Program areas, it is hoped that some progress will be made into the realm of actual program evaluations. Now that a better understanding of the programs exists, and in many instances objectives have been identified, program performance should be more easily evaluated.

VI. Program Goals and Objectives

The identification of goals and objectives is a crucial component of any PPB System. They establish the foundation upon which the remainder of the system rests. There is, however, some confusion concerning the terminology used in this area and some apprehension concerning how goals and objectives should be written. What follows is an attempt to reduce the confusion and to allay the apprehensions.

Goals can be defined as: Statements of broad direction, general purpose, or intent. They are generally timeless and not specific in their fulfillment. Examples of goals are: (1) To help students appreciate culture and beauty in their world, and (2) To develop a desire for learning.

Objectives relate to desired instructional outcomes. They are generally achievable and more specific in their intent than are goals. Examples of objectives are: Students will know the capital cities of twelve nations in South America and (2) The student will add correctly two single digit numbers.

Objectives may vary in several dimensions. They may be written in the behavioral or non-behavioral terms. They may be written to describe various levels of program outcome. They also may vary in terms of the type of learning involved.

Objectives stated in non-behavioral terms tend to be more like goals. They tend to be vague and cause difficulty in evaluating a student's progress. Quite often they are of little value in helping the teacher prepare his teaching lessons and strategies, and they generally do not offer the students much help in knowing what is expected from them. They generally do not inform students specifically of what they will gain from the instruction.

Some examples of objectives stated in non-behavioral terms are: (1) To help students communicate more effectively, (2) To establish the habit of critical thinking, (3) To encourage creative thinking.

Note the difficulty one has answering the following questions as they relate to the objectives above: How can the level of success of students in attaining the objectives be assessed? How would you prepare a lesson to help students accomplish the objectives? How will the students know if they have accomplished the desired outcomes? In general, although these are the types of objectives we as teachers often write; they really are not as helpful as they could be.

Objectives written in behavioral terms, on the other hand, offer many advantages. An objective written in behavioral terms often has the following characteristics: (1) It states an action to be performed by a student. (2) It states the conditions under which the performance is to occur. (3) It defines the criterion for acceptable performance. Some examples of behavioral objectives are as follows: (1) Given a model of the human skeleton, the student will be able to correctly identify, by labeling, at least 25 bones. (2) Given a 12 inch ruler, the student will be able to correctly measure the width of his desk top with an error no greater than 1/2 inch. (3) At the termination of the unit, the student will be able to list, in writing at least twelve states not involved in the U.S. Civil War.

Now ask yourself the same questions concerning these behavioral objectives as you did before for the non-behavioral objectives. (1) How can the level of success of the students in attaining the objectives be assessed? (2) How would you prepare a lesson to help students accomplish the objectives? (3) How will the students know if they have accomplished the desired outcomes? Answering these important questions is much easier when referring to objectives written in behavioral terms.

Objectives may be written to describe what the instructor expects to accomplish, or in such a way as to describe what the student will achieve. Compare the following: (1) To prepare students for advanced education, (2) To inculcate a respect for law and order, (3) Kindergarten students will be able to pick up colored blocks that correspond to the oral directions from the teacher with 100 percent accuracy. (4) The sixth grade students, given a list of twenty foreign countries, sill identify those countries that are found in South America.

You will note that objectives (1) and (2) relate to the responsibilities of the instructor; those in (3) and (4) refer to what the student is to accomplish. Since the output of our teaching is increased student competency, it is generally believed that objectives that relate directly to student accom-

plishments are better. Notice also that the responsibility for attaining the objective is shifted from the instructor to the student when the objective is stated in terms of student accomplishment.

Objectives also vary as to the level of the program to which they pertain. Objectives may be written to describe expected student achievement at the program, instructional or task levels. An example of an objective written at the program level for Social Studies might be: Given a specific situation in which a problem is presented, the learners will use the problem solving technique of inquiry to solve the problem according to the criteria of investigation specified in the Social Studies Curriculum Guide.

An instructional level objective for students in a Government class might be: During the period preceding a major election, the learner, in relation to his own political, social and economic position will evaluate candidates and issues involved, according to a pre-established criteria devised by the teacher and the class.

A task level objective might be: The student shall mark the location of his voting precinct for the next general election on a map of his city.

Objectives may also vary according to the behavioral category or domain with which they deal. Those which deal with intellectual activities are referred to as cognitive objectives. Those dealing with the attitudinal, emotional and valuing behaviors of students are identified as affective objectives. Those dealing primarily with physical and neuromuscular skills are referred to as psychomotor objectives. Most educational objectives deal with cognitive behaviors but excellent objectives can be written dealing with affective and psychomotor behavior.

A cognitive objective might be: When presented with a list of nouns and pronouns, the student will be able to label each work correctly.

An example of an affective objective is: The learner shall voluntarily participating in an extra-curricular music activity during the second semester of the ninth grade.

An example of a psychomotor objective is : The learner shall clear the high jump bar set at 4 feet 6 inches in three out of five attempts.

Writing Behavioral Objectives:

The following information might be helpful in writing behavioral objectives: (1) Remember the chacteristics of a be-

havioral objective. A behavioral objective: (A) Must have an observable behavior or performance as its goal. (B) Although not absolutely necessary, will generally state the conditions under which the performance is to occur. (C) Usually has a competency level. (2) Key words are often used in specifying observable behavior. Words that mean something can be observed, checked, or recorded in some manner are usually used. Such words as: demonstrate, solve, identify, discuss, define, classify, and compare are excellent examples of these kind of key words.

Learning objectives can often be clarified if the conditions (materials, data, tools, etc.) are specified as being "given" or "withheld." A statement of conditions is not always needed, but if applicable, as in the objectives listed below, they help fulfill the first requirement of a good objective - clear communication. The conditions are underlined.

Given a Spainish-English dictionary and a Spanish short story not previously read, in one hour the class will translate the story into English with 90 percent correctness with no student achieving less than 75 percent correctness.

On a take home examination with use of any books desired, all students will write an original short story judged adequate by the teacher as to plot, development, and style.

Given a standard first grade reader, learners will read aloud averaging not more than 4 errors per page, with no student erring more than 10 times.

Any observable behavior may be measured, evaluated, or described. The portion of the objective which deals with measurement, evaluation or description is the competency level. Key words to look for would include adjectives and quantity variables. For example: (1) with 90 percent accuracy, (2) not more than 3 errors, (3) 80 percent accuracy, (4) at least 6, (5) at least 3 times, (6) grammatically correct as judged by the teacher, (7) at least 4. In short, the competence level answers the question, "how well."

In considering the role of goals and objectives in the implementation of PPBS, three questions arise (1) Must all of the goals and objectives be written in performance or behavioral terms? (2) How specific should the objectives be? (3) Must competency levels be included?

These are exceedingly important questions and there probably are no perfect answers to them. To demand that every objective in every program be written in very specific terms with specified competency levels leads to a quagmire of in-

formation and direction that could literally stifle the system. On the other hand very general goals with no expectations as to performance give little direction.

In general, our responses to these questions have been:

(1) Whenever possible objectives should be written in behavioral terms; however, if it is believed youngsters gain something vital from a program and it is impossible to describe it in behavioral terms, it should still be included. There are undoubtedly some things schools provide youngsters that still need to be defended in terms of professional perceptions of the best response to the needs.

(2) At least in the first stages of implementation it is wise not to become too involved in the basic instructional and task level objectives. Concentration upon the broader district-wide program objectives will probably be more fruitful. As evaluation techniques and teacher involvement become more thorough, additional attention can be devoted to specific objectives.

(3) As curriculum is being developed by the Fort Wayne Schools great emphasis is being made on writing objectives in behavioral terms. At this point, less emphasis is being placed upon designating competency levels. Prime concern is upon student growth. Reasonable expectations will be more easily determined after some experience has been gained utilizing clearly defined objectives.

A clear danger which faces the implementation of PPBS is becoming buried in an avalanche of minuta. The consequence of which would be detrimental to the hopes of finally deriving the optimum benefits from the system.

In a PPB System the objectives of the general program areas should direct the determination of the objectives in the specific program areas and vice versa. For instance, the objectives of Social Studies should be given direction by the objectives of secondary education and should in turn contribute to the fulfillment of the general secondary education objectives. It would seem expedient to develop those for the general areas of the program structure first.

VII. Program Alternatives

In considering program alternatives a starting place is to accept that the programs presently in operation represent one alternative. Those programs have been put to the test and generally, have shown endurance. Determining alternatives

for programs can be best accomplished in two instances. (1) Alternatives should be sought for programs that are not producing satisfactory results or are operating very inefficiently. (2) Any new or radically revised program should not be initiated until alternative methods of reaching the predetermined objectives have been carefully studied.

Widespread grass roots input should be sought in arriving at alternative programs. Study of the suggested alternatives should be thorough and include the perceptions of those to be affected by the proposed program. Specialists in the program area as well as fiscal and other supportive personnel who have expertise in special areas might contribute to a more thorough analysis. Eventually one person must assume prime responsibility for putting the proposed alternatives into written form for consideration. The importance of committing alternate plans to written form cannot be overstated. First of all, the very process of converting thoughts onto the written page causes a clarifying action to transpire. Secondly, available alternatives in written form allows a more thorough study and restudy, if necessary. Thirdly, the written document expedites a re-evaluation of both the selected program and the planning process after the selected program has been in operation.

Regularly scheduled program evaluations should reveal which programs need revision. When a program is not producing expected results, then is the time to initiate a carefully planned process designed to identify alternative approaches to accomplish the desired outcomes. This places a heavy reliance upon the evaluation process but it protects school management from spinning its wheels looking for alternatives for all programs.

II. Cost Analysis

Although the nature of the output of educational programs makes cost-benefit analysis difficult and, at the present time, nearly impossible; there are certain types of cost data analysis that can be done which can be useful.

In the supportive programs such as food services and transportation, unit costs can be determined without too much problem. Cost per meal, and cost per student mile for transportation can be calculated and cost projections can be made that will allow comparison of alternative methods of providing these essential services.

Some of the supportive services are not as clearly output oriented and in a very positive sense exist only for the purpose of assisting the instructional programs in achieving their goals. Thus, costs relating to these programs become indirect costs of the instructional programs. In order to

have a clear understanding of the instructional program costs, these indirect costs should be identified and associated with the appropriate instructional program. Examples of supportive programs such as this are: payroll services, accounting, buildings and grounds, data processing, personnel, warehousing, and purchasing. The process of allocating these indirect costs is complicated by the fact that the supporting services are interrelated and become indirect costs for each other as well as for the instructional programs. This interrelationship is easily seen between two support programs such as payroll services and data processing. The staff of date processing receive paychecks so they are served by payroll services. On the other hand, many of the processes of payroll services are performed by data processing. Thus in arriving at indirect costs, a two step method of allocation must be utilized. The process is described well in the previously mentioned Revised Handbook II. The Fort Wayne Community Schools have been assigning indirect costs to programs for the past few years. They do represent a significant cost factor. In our case indirect costs account for approximately 10 percent of total program cost.

Direct costs of program can be determined either precisely by accounting by program or as close estimates by "crosswalking" expenditures in the same manner as "crosswalking" of budgets discussed earlier. If program cost and enrollment data are available, it is not difficult to arrive at unit cost indicators such as: cost per student enrolled, cost per student served, and/or cost per student instructional hour. Once these cost indicators are available comparisons for management decision making become possible. Cost comparisons between program areas and alternative program designs become possible. If more than one school exists in the school system and if records are kept by school, comparison of program costs by school are also available and valuable. Instructional costs in terms of cost per instructional hour are especially revealing and worthy of administrative consideration.

Since it is difficult to determine cost-benefit ratios for instructional programs at the present time, some other method of weighing alternative programs for the optimum use of funds is necessary. It is suggested that a process such as the following can be used. Very specific objectives for an instructional program can be determined. Alternative programs can be carefully described to attain those objectives. The cost of each alternative program can be determined and the costs of the various alternatives can then be compared in the selection process. If the alternatives have equal merit in other ways, then costs are available as a criterion for selection. A word of warning, costs should be projected a few years into the future as the first year costs are often not representative of normal costs for a program. Follow up

and evaluation are also very important in this process. The selected alternative must be evaluated to be sure that it is providing the results specified by the pre-identified objectives. If those objectives were clearly identified, this should not be too difficult of a task.

An attempt is being made this year by our Instructional Media Department to directly relate costs to services, and priorities among the services, offered by the department. Basically the processes to be followed are these: (1) the major service areas are identified (2) teachers, students, administrators, and community representatives are asked to rank these services in terms of importance to students, (3) A composite priority ranking is determined, (4) Costs are determined and allocated to the service areas (time charts are to be kept to facilitate the proration of personnel costs) and (5) Expenditures for each service will be totaled and these costs will then be compared with the priority ranking assigned the service. It is believed that better utilization of resources can be accomplished through this technique. Of course, the distribution of expenditures need not optimally be in the same rank order as the priorities of the service. If it is possible to achieve the number one priority completely and successfully for a small expenditure, it would be foolish to spend more in that service area. The common belief that you can tell an organization's priorities by looking at how it expends its funds is not totally correct.

In general, although such cost analysis practices as cost-benefit, cost effectiveness and marginal benefit per dollar are difficult to determine in education, there are procedures that can be used to increase the efficient use of financial resources. The procedures described are being used by the Fort Wayne Community Schools for that purpose.

IX. Management Information System

With the advent of computers, the potential for data availability has increased immensely. Unfortunately this potential has often caught educators unprepared and we are still searching for effective and useful ways to utilize that potential. PPBS encourages informed decision making. Thus it also encourages use of information, but the bit question remains "What information?" The answer to that question is still being pondered but our experience does give some clues as to what may prove to be helpful. Many factors of a local nature will probably affect any particular district's need, so what the Fort Wayne Community Schools sees as a need may or may not serve as a guide for other districts.

To date the PPBS office has made use of the following types of information: pupil enrollments, pupil projections, enrollment by course, student instructional hours by program,

student grades by program, standardized test results by program, student, teacher, and administration perceptions of program effectiveness, student attendance reports, teacher assignment by program, class size and teacher utilization, building utilization, personnel allocations, personnel assignments, property inventory, budget projections, expenditures by program, expenditures by cost center.

The data processing center of the Fort Wayne Community Schools regularly processes most of the types of information listed above. It presently is engaged in a Title III project which is designed to help develop management information programs and to refine those presently in use. Without the capacity of data processing to handle data, many of the facets of PPBS would certainly be more difficult but not impossible. Many of the types of analyses our PPBS office has completed have utilized types of raw data any school system has available concerning its operations.

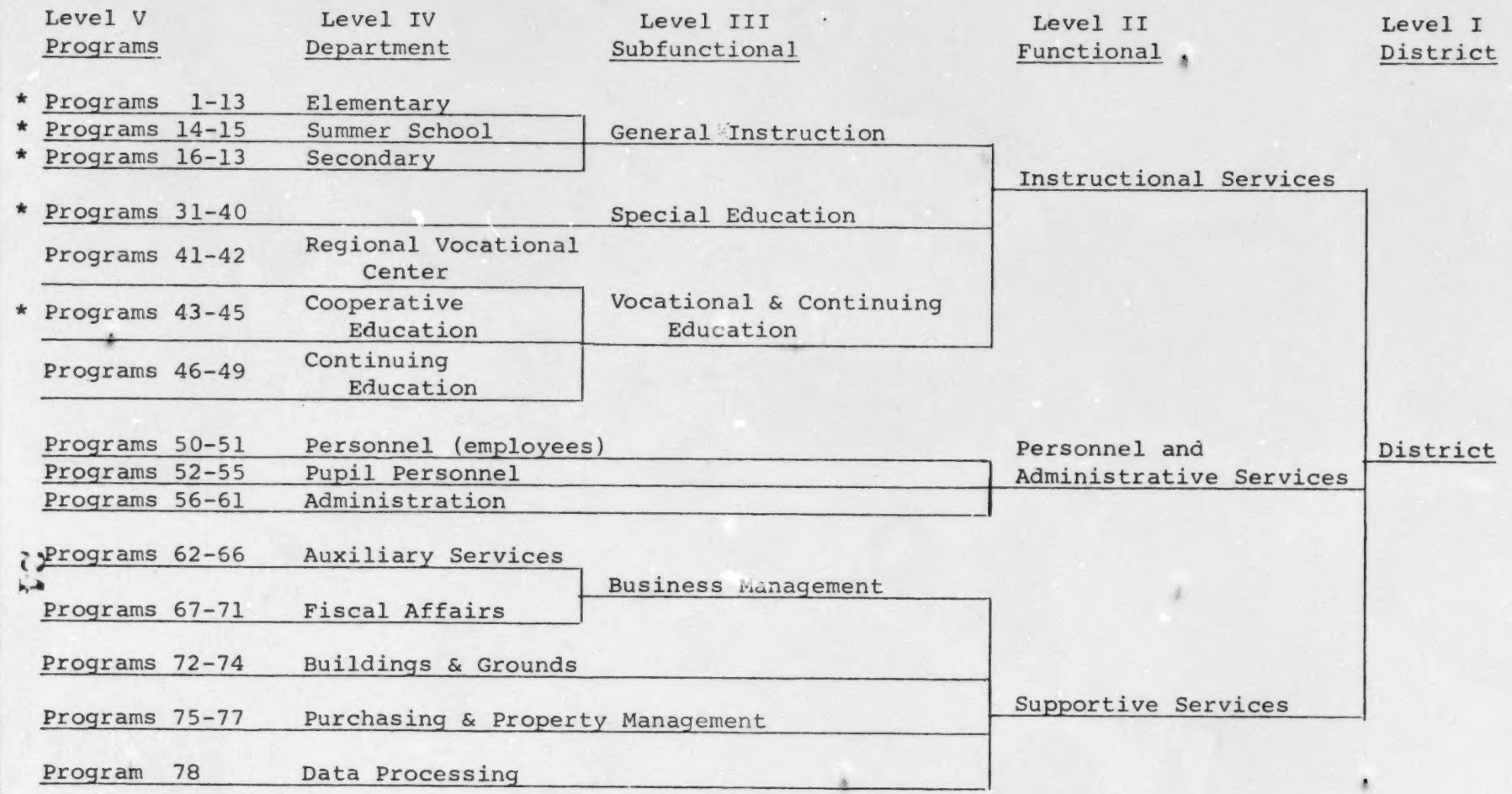
Appendices

Timetable for PPBS in

Fort Wayne Community Schools

	Completion Dates
1. Committment by Board	June 1971
2. Advisory Committee Names	Nov. 1971
3. Approval as State Project	Jan. 1972
4. Project Director Appointed	Feb. 1972
5. Present Programs Identified	Mar. 1972
6. Administrative Personnel Oriented	Mar. 1972
7. 1972 Budget Transformed to Program Budget Format	Mar. 1972
8. Completion of Preliminary Orientation of Certified Personnel	June, 1972 June, 1972
9. Pilot Programs Identified	Sept. 1972
10. System Wide Goals and Objectives Researched	Sept. 1972
11. Evaluation Procedures for Present Programs Identified	Nov. 1972
12. 1973 Budget Prepared in Quasi-Program Format	Dec. 1972
13. Present Programs Evaluated	Apr. 1973
14. Progress Reports Due for Pilot Programs	Apr. 1973
15. Program Type Budgets Prepared for all Programs	May, 1973
16. 1974 Budget in Program Format Utilizing Pilot Programs and Existing Programs	June 1973
17. Prepare Annual Program Development Cycle	June 1973
18. System for Program Budgets Review and Consolidation Completed	July, 1973
19. In-Service Work on Performance Objectives Completed	Aug. 1973
20. Re-evaluate Program Structures	Sept. 1973
21. Complete In-Service Work for Program Managers	Oct. 1973
22. Trial Resource Utilization & Cost Analysis Complete for All Programs	Apr. 1974
23. Projection of Trial Multi-Year Programs for All Programs	Apr. 1974
24. Completion of a Rather Complete Program Budget for 1975	May 1974
25. Refinement of Program Preparation Procedures	June, 1974
26. Needs for In-Service Work Determined	June, 1974
27. Evaluation of Project Completed	Sept. 1974

PROGRAM STRUCTURE



Special Projects - Programs 79-

* As developed at the individual school level.

9/15/72

LEVEL V - PROGRAMS

1. Preschool
2. Practical Arts-Elementary
3. Physical Education-Elementary
4. Art - Elementary
5. Music - Elementary
6. Instructional Media-Elementary
7. Kindergarten
8. 1st Grade
9. 2nd Grade
10. 3rd Grade
11. 4th Grade
12. 5th Grade
13. 6th Grade
14. Elementary Summer School
15. Secondary Summer School
16. Music
17. English
18. Business Education
19. Home Economics
20. Mathematics
21. Social Studies
22. Science
23. Physical Education
24. Health & Safety Education
25. Driver Education (Driving Portion)
26. Art
27. Industrial Arts
28. Foreign Language
29. Extra-Curricular Activities
30. Instructional Media
31. Physically Handicapped
32. Multiple Handicapped
33. Partially Sighted
34. Perceptually Handicapped
35. Educable Mentally Retarded
36. Trainable Mentally Retarded
37. Deaf
38. Emotionally Disturbed
39. Speech & Hearing
40. Homebound
41. Secondary Vocational
42. Post High School Vocational
43. Cooperative Office Education
44. Industrial Cooperative Training
45. Distributive Education
46. High School Credit Continuing Education
47. Adult Vocational Continuing Education
48. General Interest Continuing Education
49. Apprenticeship
50. Certified Personnel
51. Classified Personnel
52. Attendance & Pupal Accounting
53. Guidance Service
54. Health Services
55. Testing & Psychological Services
56. Board of School Trustees
57. District Administration
58. Individual School Administration
59. Employee Relations
60. Information and Community Services
61. School Press
62. Books and Supplies
63. Transportation - Supplemental
64. Transportation - Regular School
65. Food Services
66. Warehousing & Distrubution
67. Budgeting
68. Accounting
69. Payroll
70. Debt Service
71. Capital Outlay
72. New Construction
73. Operations
74. Maintenance
75. Purchasing
76. Equipment Maintenance
77. Property Control
78. Data Processing
79. Special Projects

ESTIMATED 1972 PROGRAM BUDGET

PERCENTAGE DISTRIBUTION OF APPROPRIATIONS

Elementary Instruction	30.09				
Summer School	.77	General Instruction	60.21		
Secondary Instruction	29.35				
Special Education	2.78	- - - - - - - - - - -		Instructional Services	64.42
Regional Vocational Center	.84				
Cooperative Education	.51	Vocational and			
Continuing Education	.08	Continuing Education	1.43		
		Personnel	.48		
		Pupil Personnel	4.19	Supporting Services	14.02
		Administration	9.35		
		Auxiliary Services	4.04		
		Buildings & Grounds	14.86		
		Fiscal Affairs	1.00	Business Management	21.19
		Purchasing & Property Management	.59		
		Data Processing	.70		
		Special Projects	.38	- - - - - - - - -	.38

4-21-72

ASSESSMENT OF INSTRUCTIONAL PROGRAMS

It appears that the American Society has undergone a change which makes questioning and skepticism proper approaches towards institutions. The schools have not escaped this tendency. We find ourselves in a social situation that calls for increased vigor in defending our programs and in projecting a positive image. The Fort Wayne Community Schools System needs to make no apologies; it is a quality school system and provides youngsters with outstanding programs. We must, however, continually assess and upgrade our programs and appraise our allocation of resources. As a part of this process and as part of the PPBS project, the assessment of all instructional programs has been designated a priority task for this school year.

A committee has been meeting and has established a suggested format for this assessment. The following represent the suggestions of that committee:

(1) The assessment will be systemwide in its orientation. Information may be gathered from the individual schools but the prime focus of this first general assessment will be upon systemwide programs.

(2) The general assessment procedures will be under the leadership of Dr. Anthis, Dr. Robbins, Miss Hartman, Dr. Welch, and Dr. Null. Consultants and consulting teachers will be responsible for coordinating the assessment of their program areas. They will also have the responsibility for the final reports for their programs.

(3) The final reports should be presented to Dr. Robbins or Miss Hartman prior to March 30, 1973. To reduce the material to a manageable amount, it is suggested that each report should not exceed fifteen typewritten pages. If refinement of material is possible without reducing the quality of the report, a shorter report is preferred. Supportive data should be retained by the consultant or consulting teacher so it will be available if needed. Each report should also include a one-page

brief of the study.

(4) The Testing Department is enthusiastically supporting the assessment procedures and will provide assistance in assembling test data, in statistical analysis, and in utilization and construction of measurement devices.

(5) The following represents a general suggested format for the assessment. Only those parts which are pertinent to a particular program need be used for that program.

I. Program Title

II. Brief Narrative Description of Program

A. Scope and sequence

B. Instructional Methods

III. Statistical Report

A. Input

1. Number of personnel

a. Certified
b. Classified

2. Number of students served (percent of total school population)

3. Number of class groups

4. Courses offered - subjects taught

a. Enrollment trends (stable, increasing, decreasing)

B. Output

1. Assessment of Student Achievement

a. Reports from achievement tests (Stanford, S.R.A., I.T.E.D., etc.)

(1) Average scores
(2) Percentage of students working above, below, or a level consistent with grade level.
(3) Range of scores
(4) Number of students making gains of 1 year, less than 1 year, more than 1 year
(5) Relate achievement to expectancy model

b. Other achievement indications

(1) Percentages of grades earned
(2) Using rating scale or checklist to make objective evaluation of student product (especially relevant to performance oriented programs)
(3) Percentage of students winning scholarships or other special recognition
(4) Evidences of success of graduates

2.*Assessment of perceptions of students, teacher, and administrators concerning programs

a. Using: rating scales, checklists, questionnaires

IV. Summary and Implications

Discuss strengths, weaknesses, suggested improvement, implications of data, etc.

* Coordination of instruments and random sampling are strongly urged to reduce the imposition upon students, teachers and administrators.

DAN:pp
12/27/72

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